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Situation on Aircraft Spare Parts in Satellite Countries. Dependence on Soviet Deliveries

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seven-page report on aircraft spare parts in Hungary, Poland, Czechoslovakia, and Rumania. The report deals mainly with the situation in Hungary and her dependence in this field on supplies from the USSR.

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HUNGARY/SOVIET BLOC

Air/Economic/Political

Spare Parts Situation in the Hungarian Air Force from 1951 - 1956

Planning within the Hungarian Air Force

The supply of aircraft spare parts to the Hungarian Air Force from 1951 to 1956 was so critical that at NO time during that period could it be said that the Hungarian Air Force was in a state of complete preparedness.

2. The main single reason for the critical spare parts position was the inability of the Hungarian Air Force Engineering Service to attempt any satisfactory forward planning of spare parts requirements and production since, owing to factors completely outside their control, it was impossible to forecast the numbers or, indeed, the types of aircraft which would be in service at a given time.

3. The actual supply of aircraft for the Hungarian Air Force depended entirely upon the U.S.S.R. and its decisions as to which aircraft should be made available. Thus in 1951 MiG 15s were supplied followed in 1952 by Tu 2s and, in late 1952, by MiG 15 (bis). No new types of aircraft were provided until 1956 when MiG 17s, which were scheduled for delivery in 1957, were suddenly received by the Hungarian Air Force and, at the same time, it was announced that MiG 19s due for delivery in 1957/1958, would be delivered in December, 1956.

4. The condition of the aircraft received from the U.S.S.R. was never satisfactory. Such aircraft had invariably already completed at least 200 flying hours and were due to be grounded for a major overhaul (in certain cases this was already the second major overhaul in the aircraft's life) and, in a great number of cases, this overhaul completely exhausted the very modest quota of spare parts

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originally

originally delivered with the aircraft.

5. It was, intheory, possible for the Hungarian Air Force to order spare parts from the Soviet Union and also from Poland and Czechoslovakia but, even when they placed such orders (the delay in delivery was always some 6 - 12 months), matters seldom went smoothly. There was, in such cases, an initial difficulty in obtaining the necessary Hungarian Ministerial approval for the financial outlay but, even when the indents had gone through, there were many cases of the necessary spares being non-available, a fact which did not, however, prevent the Russians on every occasion sending spare parts of some kind to the value of the original order, for which order "Valuta forints" had already been received by the Russians.

6. The procurement of suitable spare parts from Poland and Czechoslovakia and even the U.S.S.R., was further complicated by the fact that, even when the correct spare parts were supplied, there were very many occasions on which they were not exact replacements for the defective component. This was undoubtedly due to the existence of many series of the same aircraft type and variations within each series, depending on the factory of manufacture of the aircraft. Thus, on close examination it was found that there were 56 variations within the 150 Tu 2s in service with the Hungarian Air Force.

7. It appears almost certain that this strikingly large number of varied aircraft can be attributed to be very poor quality of manufacturing plans supplied to Soviet aircraft factories. It is certain that specifications were inexact or insufficient and it appears likely that variations in design have resulted from local chief engineers being themselves forced to fill in blanks in plans supplied.

8. Confronted on the one hand by these difficulties in obtaining spare parts from the WARSAW Pact countries and, on the other, with the

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the operational demand to keep the maximum number o
serviceable condition, the Hungarian Air Force Engineering Service decided that the only solution lay in the production in Hungary of the necessary spare parts. and the problem was handed over to their Industrial Section.

9. From the delivery of the MiG 15s in 1951 until 1953, there were constant discussions between the Hungarian Air Force, the Army Council and the Ministry of Defence in an attempt to obtain permission to begin manufacture of spare parts in Hungary but the attitude of Ministers (including RAKOSI, when the matter was referred to him personally in 1952) was entirely non-committal and it was not until late 1953, when the situation regarding the MiG 15s had become quite desperate, that reluctant approval was eventually forthcoming.

10. From the middle of 1952 onwards, officers of the Hungarian Air Force Engineering Service Industrial Section had secretly begun to plan for the eventual production of spare parts. They found themselves handicapped from the outset by their lack of satisfactory aircraft manuals for the MiG 15s and the complete non-availability of even the simplest manufacturing specifications for MiG 15 components

it was decided, therefore, that it would be necessary to have special drawings made for each component to be manufactured. In late 1952 officers of the Hungarian Air Force Engineering Service Industrial Section secretly removed a number of defective components from MiG 15s grounded in aircraft repair establishments and handed these over to AGTI (Atalanos Geptervezö Inoda) at BUDAORS. AGTI produced the necessary manufacturing specifications and then passed these to factories with instructions to prepare for their production giving at the same time, details of the number of components initially required. Thus in 1953, when Ministerial approval was eventually given,

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plans for production were almost complete.

11. In June, 1956, when MiG 17s first arrived for the Hungarian Air Force, steps were immediately taken by engineer officers to acquire components which they knew to bequire regular replacement and to have manufacturing specifications prepared by AGTI and forwarded to the factories. It was hoped that by taking such speedy action, it might prove possible to keep the MiG 17s in a better state of repair than had been possible in the case of the MiG 15s.

12. The announcement in July, 1956, of the impending arrival of MiG 19s convinced Hungarian Air Force engineering officers that they must, however, find a more radical solution to their spare parts problems and Soviet permission was sought and eventually obtained for a group of Hungarian Air Force engineering officers and civilian aircraft engineers to visit the U.S.S.R. in December, 1956, to study the Soviet aircraft industry with special emphasis on the manufacture and repair of MiG 19s and also the aircraft spare parts problem. Ministerial approval had been given to the Hungarian delegation to purchase what spare parts they could obtain for MiG 17s and MiG 19s as well as Il 28s, and the sum of three million roubles had been made available for this purpose.

Hungarian Production of Aircraft Spare Parts

13. The supply of aircraft spare parts for the Hungarian Air Force was by no means solved when a decision was forced out of the Ministry to allow production in Hungary because the Hungarian aircraft and allied industries were not in a position to cope with the Hungarian Air Force requirements.

14. Directorate I of the Hungarian Ministry of Smelting, which

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was responsible in theory for the production of aircraft and aircraft spare parts, was in no degree enthusiastic about production of complicated and costly series produced components and this was reflected in the tooling in factories producing spare parts. Such factories were, in general, tooled for 60% capacity on mass produced spare parts (e.g. bolts, rivets, plating, tubes, etc.) and, at most, 40% capacity on series produced spare parts (e.g. compressors, hydraulic system components, special bearings, etc.) and no serious attempt was being made by the responsible Ministry to arrange for essential re-tooling required by the introduction of jet aircraft and the resultant demand for more and more series produced components.

15. In addition, the Hungarian aircraft industry was constantly short of the special raw materials required for many jet aircraft components since there was a great reluctance on the part of the steel works to produce small quantities of special steels and alloys required and all these factors resulted in a constant shortage of spare parts and the consequent grounding of aircraft for long periods.

16. In 1956 the main shortages were:-

a) Carbon steel and duralium high pressure flexible fuel leads.

b) Duralium wire.

c) King pins and special short rivets.

d) Fuel and hydraulic system pumps.

e) Flap components.

f) Cable locking components.

Situation in Poland and Czechoslovakia

17. The aircraft spare parts situation in Poland and Czechoslovakia was also unsatisfactory but in neither of these countries was it as

bad as in Hungary as both were more highly industrialized and had fairly well developed aircraft industries.

18. It was clear in technical discussions between Hungarian, and Polish, and Hungarian and Czech Air Force officers that in Poland and Czechoslovakia those at Ministerial and Army Council level appeared to be more interested in the planning of their own countries industries and much more adept at dealing with the Soviet "advisers" attached to their staff. This general aptitude for evolving a solution to problems was reflected throughout the aircraft industry of these two countries but with differing results. The Czechs, when faced with poor Soviet specifications or their own inability to produce raw materials, would alter - and, if necessary, improve or compromise - to suit themselves (e.g. Il.28/PRHA), whilst the Poles simply copied specifications faithfully and, if matters went wrong, shelved the project, demanded and obtained the necessary detailed specifications, actual spare parts or, even replacement aircraft elsewhere.

19. There was a very close technical co-operation between the Polish and Czech Air Forces and, on many occasions, either Air Force would telephone the other if short of an important spare part and, if it was available, have it collected by courier aircraft. On several occasions, however, even this co-operation was of little avail owing to the lack of standardization of components already described.

Rumania

20. From the limited liaison which existed between the engineer-

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engineering services of the Rumanian Air Force and the Hungarian Air Force, it is known that the spare parts situation in Rumania was even more critical than in Hungary. Rumania, having virtually no aircraft industry, was forced to rely on supplies from the Soviet Union and, as these were quite unreliable, the Rumanian Air Force was constantly faced with the problem of a large proportion of its aircraft being grounded for repairs. The attitude of the Rumanian officers appeared to be a philosophical acceptance of the fact: "if the Russians don't send us spares, we don't fly".

Attitude of Soviet Advisors

21. The Soviet advisors attached to the Hungarian Air Force appeared quite unconcerned by the increasingly chaotic spare parts position in the Hungarian Air Force. Their main interest was to ensure that some sort of temporary solution was found to each fresh crisis with a view to keeping as many aircraft as possible serviceable for at least a few more hours' flying.

22. Engineer officers of the Hungarian Air Force tried on many occasions to discuss the wider implications of the situation with these advisors and tried to gain ideas from the advisors' experience of Soviet methods. It may be that the Russian advisors were particularly careful not to disclose any information but the impression obtained from these discussions was always that the advisors' experience was limited to Air Armies and that they had no knowledge or interest in wider problems of logistics, nor were they, indeed, expected to be able to advise the Hungarians on such problems.